

AMENDMENTS TO THE CLAIMS

Please amend Claims 1, 2, 9, 10, 16 17, 24, 25, 31, 34, 37 and 40 as follows:

1. (Currently Amended) A device for allocating a forward common channel in a CDMA (Code Division Multiple Access) communication system, comprising:
 - a plurality of channel transmitters for spreading a forward common channel message according to allocated orthogonal code;
 - a storage medium for storing; ~~as orthogonal code numbers for the forward common channel used in a second CDMA communication system, orthogonal code numbers which cannot maintain an orthogonality due to an orthogonal code that the forward common channel uses at a maximum data rate, the orthogonal code being used in a first CDMA communication system, and the number of stored orthogonal code numbers is less than the total number of orthogonal code numbers of the system~~ a first orthogonal code number for a forward common channel used in a first CDMA communication system and second orthogonal code numbers for a forward common channel used in a second CDMA communication system, wherein the second orthogonal code numbers are generated by sequentially adding multiples of an orthogonal code length used at a maximum data rate to the first orthogonal code number; and
 - a controller for ~~reading the orthogonal code numbers from allocating an orthogonal code number from among the first and second orthogonal code numbers stored in the storage medium according to mobile station type information from a mobile station, and allocating a specific forward common channel such that forward common channel message is spread and transmitted by a corresponding one of the channel transmitters with a specific one of the read orthogonal code numbers.~~ to a channel transmitter from among the plurality of channel transmitters,
 - wherein a length of the first orthogonal code is equal to a length of each second orthogonal code, and the lengths of the first and second orthogonal codes are longer than the orthogonal code length used at a maximum data rate.

2. (Currently Amended) The device as claimed in claim 1, wherein the storage medium stores orthogonal code numbers generated by sequentially adding multiples of an

~~orthogonal code length used at the maximum data rate to the orthogonal code number used at the maximum data rate within a full length of the orthogonal code, and the orthogonal code number used at the maximum data rate~~second orthogonal code numbers are generated within a maximum length of an orthogonal code.

3. (Original) The device as claimed in claim 1, wherein the mobile station type information is information for identifying a mobile station for the first CDMA communication system and a mobile station for the second CDMA communication system.

4. (Original) The device as claimed in claim 1, wherein the mobile station type information includes unique number information of the mobile station.

5. (Original) The device as claimed in claim 3, wherein the controller, when it is determined from the mobile station type information that the mobile station is for the second CDMA communication system, reads from the storage medium the orthogonal codes for the forward common channel, stored for the second CDMA communication system, and allocates a specific one of the read orthogonal code numbers such that forward common channel message is spread and transmitted by a corresponding one of the channel transmitters with the allocated orthogonal code number.

6. (Original) The device as claimed in claim 5, wherein the first CDMA communication system is an IS-95 CDMA communication system.

7. (Original) The device as claimed in claim 6, wherein the second CDMA communication system is a next generation CDMA communication system.

8. (Original) The device as claimed in claim 4, wherein the controller determines a hashed number using a hash function based on the unique number of the mobile station, and selects one of the read orthogonal code numbers to allocate the forward common channel corresponding to the determined hashed number.

9. (Currently Amended) A device for allocating a forward common channel in a CDMA communication system, comprising:

a plurality of channel receivers for despreding a forward common channel message according to allocated orthogonal code;

a storage medium for storing, ~~as orthogonal code numbers for the forward common channel used in a second CDMA communication system, orthogonal code numbers which cannot maintain an orthogonality due to an orthogonal code that the forward common channel uses at a maximum data rate, the orthogonal code being used in a first CDMA communication system, and the number of stored orthogonal code numbers is less than the total number of orthogonal code numbers of the system~~ a first orthogonal code number for a forward common channel used in a first CDMA communication system and second orthogonal code numbers for a forward common channel used in a second CDMA communication system, wherein the second orthogonal code numbers are generated by sequentially adding multiples of an orthogonal code length used at a maximum data rate to the first orthogonal code number; and

a controller for ~~reading the orthogonal code numbers from~~ allocating an orthogonal code number from among the first and the second orthogonal code numbers stored in the storage medium according to a paging message received from a base station over a primary paging channel, and allocating a specific forward common channel such that forward common channel message is despread and transmitted by a corresponding one of the channel receivers with a specific one of the read orthogonal code numbers, to a channel receiver from among the plurality of channel receivers,

wherein a length of the first orthogonal code is equal to a length of each second orthogonal code, and the lengths of the first and second orthogonal codes are longer than the orthogonal code length used at a maximum data rate.

10. (Currently Amended) The device as claimed in claim 9, wherein the ~~storage medium stores orthogonal code numbers generated by sequentially adding multiples of an orthogonal code length used at the maximum data rate to the orthogonal code number used at the maximum data rate within a full length of the orthogonal code, and the orthogonal code number~~

~~used at the maximum data rate~~second orthogonal code numbers are generated within a maximum length of an orthogonal code.

11. (Original) The device as claimed in claim 9, wherein the paging message from the base station includes a number of paging channels.

12. (Original) The device as claimed in claim 11, wherein the controller, when it is determined from the paging message that the base station is for the second CDMA communication system, reads from the storage medium the orthogonal codes for the forward common channel, stored for the second CDMA communication system, and allocates a specific one of the read orthogonal code numbers such that forward common channel message is despread by a corresponding one of the channel receivers with the allocated orthogonal code number.

13. (Original) The device as claimed in claim 12, wherein the first CDMA communication system is an IS-95 CDMA communication system.

14. (Original) The device as claimed in claim 13, wherein the second CDMA communication system is a next generation CDMA communication system.

15. (Original) The device as claimed in claim 11, wherein the controller determines a hashed number using a hash function based on a number of paging channels and a unique number of the mobile station, included in the paging message, and selects one of the read orthogonal code numbers to allocate a forward common channel corresponding to the determined hashed number.

16. (Currently Amended) A method for allocating a forward common channel in a CDMA communication system including a plurality of channel transmitters, the method comprising the steps of:

~~storing, as orthogonal code numbers for the forward common channel used in a second CDMA communication system, orthogonal code numbers which cannot maintain an~~

~~orthogonality due to an orthogonal code that the forward common channel uses at a maximum data rate, the orthogonal code being used in a first CDMA communication system, and the number of stored orthogonal code numbers is less than the total number of orthogonal code numbers of the system~~ a first orthogonal code number for a forward common channel used in a first CDMA communication system and second orthogonal code numbers for a forward common channel used in a second CDMA communication system, wherein the second orthogonal code numbers are generated by sequentially adding multiples of an orthogonal code length used at a maximum data rate to the first orthogonal code number; and

~~reading the orthogonal code numbers allocating an orthogonal code number from among the first and the second orthogonal code numbers according to mobile station type information from a mobile station, and allocating a specific forward common channel such that forward common channel message is spread and transmitted by a corresponding one of the channel transmitters with a specific one of the read orthogonal code numbers. to a channel transmitter from among the channel transmitters,~~

wherein a length of the first orthogonal code is equal to a length of each second orthogonal code, and the lengths of the first and second orthogonal codes are longer than the orthogonal code length used at a maximum data rate.

17. (Currently Amended) The method as claimed in claim 16, wherein ~~said stored orthogonal code numbers include orthogonal code numbers generated by sequentially adding multiples of an orthogonal code length used at the maximum data rate to the orthogonal code number used at the maximum data rate within a full length of the orthogonal code, and the orthogonal code number used at the maximum data rate~~ the second orthogonal code numbers are generated within a maximum length of an orthogonal code.

18. (Original) The method as claimed in claim 16, wherein the mobile station type information is information for identifying a mobile station for the first CDMA communication system and a mobile station for the second CDMA communication system.

19. (Original) The method as claimed in claim 16, wherein the mobile station type information includes unique number information of the mobile station.

20. (Original) The method as claimed in claim 18, wherein when it is determined from the mobile station type information that the mobile station is for the second CDMA communication system, the orthogonal codes for the forward common channel, stored for the second CDMA communication system, are read and a specific one of the read orthogonal code numbers is allocated such that forward common channel message is spread and transmitted by a corresponding one of the channel transmitters with the allocated orthogonal code number.

21. (Original) The method as claimed in claim 20, wherein the first CDMA communication system is an IS-95 CDMA communication system.

22. (Original) The method as claimed in claim 21, wherein the second CDMA communication system is a next generation CDMA communication system.

23. (Original) The method as claimed in claim 19, further comprising the step of determining a hashed number using a hash function based on the unique number of the mobile station, and selecting one of the read orthogonal code numbers to allocate the forward common channel corresponding to the determined hashed number.

24. (Currently Amended) A method for allocating a forward common channel in a CDMA communication system including a plurality of channel receivers, the method comprising the steps of:

~~storing, as orthogonal code numbers for the forward common channel used in a second CDMA communication system, orthogonal code numbers which cannot maintain an orthogonality due to an orthogonal code that the forward common channel uses at a maximum data rate, the orthogonal code being used in a first CDMA communication system, and the number of stored orthogonal code numbers is less than the total number of orthogonal code numbers of the system~~ a first orthogonal code number for a forward common channel used in a

first CDMA communication system and second orthogonal code numbers for a forward common channel used in a second CDMA communication system, wherein the second orthogonal code numbers are generated by sequentially adding multiples of an orthogonal code length used at a maximum rate to the first orthogonal code number; and

reading the orthogonal code numbers allocating an orthogonal code number from among the first and the second orthogonal code numbers according to a paging message received from a base station over a primary paging channel; and allocating a specific forward common channel such that forward common channel information is despread and transmitted by a corresponding one of the channel receivers with a specific one of the read orthogonal code numbers to a channel receiver from among the plurality of channel receivers,

wherein a length of the first orthogonal code is equal to a length of each second orthogonal code, and the lengths of the first and second orthogonal codes are longer than the orthogonal code length used a maximum data rate.

25. (Currently Amended) The method as claimed in claim 24, wherein ~~said stored orthogonal code numbers include orthogonal code numbers generated by sequentially adding multiples of an orthogonal code length used at the maximum data rate to the orthogonal code number used at the maximum data rate within a full length of the orthogonal code, and the orthogonal code number used at the maximum data rate~~the second orthogonal code numbers are generated within a maximum length of an orthogonal code.

26. (Original) The method as claimed in claim 24, wherein the paging message from the base station includes a number of paging channels.

27. (Original) The method as claimed in claim 26, wherein when it is determined from the paging message that the base station is for the second CDMA communication system, the orthogonal codes for the forward common channel, stored for the second CDMA communication system, are read and a specific one of the read orthogonal code numbers is allocated such that forward common channel message is despread by a corresponding one of the channel receivers with the allocated orthogonal code number.

28. (Original) The method as claimed in claim 27, wherein the first CDMA communication system is an IS-95 CDMA communication system.

29. (Original) The method as claimed in claim 28, wherein the second CDMA communication system is a next generation CDMA communication system.

30. (Original) The method as claimed in claim 26, further comprising the step of determining a hashed number using a hash function based on a number of paging channels and a unique number of the mobile station, included in the paging message, and selecting one of the read orthogonal code numbers to allocate a forward common channel corresponding to the determined hashed number.

31. (Currently Amended) A device for allocating a forward common channel in a CDMA (Code Division Multiple Access) communication system, comprising:

a plurality of channel transmitters;

a storage medium for storing, as second orthogonal codes, orthogonal codes which cannot maintain an orthogonality due to a predetermined first orthogonal code, the stored orthogonal codes being codes that are non-orthogonal with the first orthogonal code; and

a controller for reading one of the second orthogonal codes from the storage medium according to allocation request of the forward common channel and allocating a specific forward common channel such that forward common channel message is spread and transmitted by a corresponding one of the channel transmitters by the read orthogonal code.

32. (Previously Presented) The device as claimed in claim 31, wherein the second orthogonal codes include a number of the first orthogonal code and numbers generated by sequentially adding multiples of an orthogonal code length used at the maximum data rate on a forward channel to the number of the first orthogonal code, and the numbers are less than the maximum number of the orthogonal code capable of being allocated to the forward channel.

33. (Previously Presented) The device as claimed in claim 31, wherein the controller is configured to perform reading one of the second orthogonal codes from the storage medium by means of a mobile station type information requesting allocation of the forward common channel and hashed number determined by hash function using unique number information of the mobile station.

34. (Currently Amended) A device for allocating a forward common channel in a CDMA (Code Division Multiple Access) communication system, comprising:

a plurality of channel receivers;

a storage medium for storing, as second orthogonal codes, orthogonal codes which cannot maintain an orthogonality due to a predetermined first orthogonal code, the stored orthogonal codes being codes that are non-orthogonal with the first orthogonal code; and

a controller for reading one of the second orthogonal codes from the storage medium according to a paging message received from a base station over a primary paging channel, and allocating a specific forward common channel such that forward common channel message is despread and decoded by a corresponding one of the channel receivers by the read orthogonal code number.

35. (Previously Presented) The device as claimed in claim 34, wherein the second orthogonal codes include a number of the first orthogonal code and numbers generated by sequentially adding multiples of an orthogonal code length used at the maximum data rate on forward channel to the number of the first orthogonal code, and the numbers are less than the maximum number of the orthogonal code capable of being allocated to the forward channel.

36. (Previously Presented) The device as claimed in claim 34, wherein the controller is configured to perform reading one of the second orthogonal codes from the storage medium by means of a mobile station type information requesting allocation of the forward common channel and hashed number determined by hash function using unique number information of the mobile station.

37. (Currently Amended) A method for allocating a forward common channel in a base station of a CDMA communication system including a plurality of channel transmitters, the method comprising the steps of:

storing, as second orthogonal code numbers, orthogonal codes, which cannot maintain an orthogonality due to a predetermined first orthogonal code, the stored orthogonal codes being codes that are non-orthogonal with the first orthogonal code;

reading one of the second orthogonal codes from the storage medium according to allocating request of the forward common channel; and

allocating a specific forward common channel such that forward common channel message is spread and transmitted by a corresponding one of the channel transmitters by the read orthogonal code.

38. (Previously Presented) The method as claimed in claim 37, wherein the second orthogonal codes include a number of the first orthogonal code and numbers generated by sequentially adding multiples of an orthogonal code length used at the maximum data rate on a forward channel to the number of the first orthogonal code, and the numbers are less than the maximum number of the orthogonal code capable of being allocated to the forward channel.

39. (Previously Presented) The method as claimed in claim 37, wherein the step of reading one of the second orthogonal codes from the storage medium is accomplished by a mobile station type information requesting allocation of the forward common channel and hashed number determined by hash function using unique number information of the mobile station.

40. (Currently Amended) A method for allocating a forward common channel in a mobile station of a CDMA communication system including a plurality of channel receivers, the method comprising the steps of:

storing, as second orthogonal code numbers, orthogonal codes, which cannot maintain an orthogonality due to a predetermined first orthogonal code, the stored orthogonal codes being codes that are non-orthogonal with the first orthogonal code;

reading one of the second orthogonal codes from the storage medium according to a

paging message received from a base station over a primary paging channel; and

allocating a specific forward common channel such that forward common channel message is despread and decoded by a corresponding one of the channel receivers by the read orthogonal code number.

41. (Previously Presented) The method as claimed in claim 40, wherein the second orthogonal codes include a number of the first orthogonal code and numbers generated by sequentially adding multiples of an orthogonal code length used at the maximum data rate on a forward channel to the number of the first orthogonal code, and the numbers are less than the maximum number of the orthogonal code capable of being allocated to the forward channel.

42. (Previously Presented) The method as claimed in claim 40, wherein the step of reading one of the second orthogonal codes from the storage medium is accomplished by a mobile station type information requesting allocation of the forward common channel and hashed number determined by hash function using unique number information of the mobile station.